



AcoustaDamp™

EXPANDABLE STRUCTURAL DEADENER

GENERAL DESCRIPTION

Heat-Expandable Deadener Material for use with Stamped Constrained Layer Dampers (CLDs) or Patch Constrained Layers (PCLs) for Treating Structure Borne Noise

PRODUCT HIGHLIGHTS

- ✓ Die-Cut Polymer Sheet which is attached via Welding, Mechanical or Adhesive to Steel CL
- ✓ Complete Fill of Engineered Gap between the CL and Body Panel
- ✓ High Damping Rate, especially between 15 - 60C
- ✓ Increased Local Stiffness, which Increases Hz
- ✓ Provides Corrosion Resistance to Body Panels



MATERIAL PROPERTIES

APPEARANCE	Non-Specific Black/Brown			
SPECIFIC GRAVITY	1.3 – 1.4 (prior to Expansion)			
WEIGHT/AREA	Thickness	kg/m ²	lb/ft ²	
	1.0mm (0.040 in)	1.35	0.28	
	1.5mm (0.060 in)	2.03	0.42	
EXPANSION Bake 20 min @163C		Volume	Vertical	
		125-200%	200-300%	
ADHESION PROPERTIES (Tested on Oiled CRS)	Initial	Salt Spray (250 Hrs)	Heat Aging (250 Hrs @175C)	100% Humidity (250 Hrs @38C)
	Panels Cured for 20 min @163C then 30m @121C	100% Cohesive	100% Cohesive (No Undercut Corrosion)	100% Cohesive (No Undercut Corrosion)
DAMPING PROPERTIES	Oberst Test for Composite Loss (η_c) per SAE J1637 0.8mm Base Beam / 0.6mm Top Beam / 2.5mm Bond Line (Linear extrapolated results @200Hz) Results = 0.18 @15C / 0.29 @23C / 0.32 @30C / 0.33 @45C / 0.19 @60C			
STIFFNESS PROPERTIES	Cantilever Beam Test (Beam Length of 10.0" w/100g Weight @23C) Deflection = 0.055 in			



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APPLICATION

- ✓ Typical Automotive Applications
 - Wheel House
 - Plenum
 - Oil Pan
 - Dash Panel
 - Floor Pan
- ✓ Description of Processing
 - Die-Cut Polymer Sheet applied to Stamping (CRS or AL) Constraining Layer
 - Fastened by Heat-Staking, Adhesive, Toy-Tabs or Staples
 - Welded to Panel (from Applications)
 - Expands & Cures in E-coat Oven (325-375F)

OTHER MATERIAL PROPERTIES

- ✓ Flammability – passes FMVSS 302
- ✓ Resistant to most automotive solvents (no De-Lamination)
- ✓ Water Absorption is 10% Maximum Shrinkage is 5% Maximum (find actual %'s)
- ✓ Phosphate / E-Coating Compatible (figure out how to spell compatible)
- ✓ Flow - material does not flow at elevated temp
- ✓ Good Tensile strength
- ✓ Good Adhesion to CRS and AL